

Title (en)

Cooling roller with an outer roller envelope and an inner body.

Title (de)

Kühlwalze mit einem äusseren Walzenmantel und einem Innenkörper.

Title (fr)

Cylindre de refroidissement comportant une enveloppe cylindrique extérieure et un corps intérieur.

Publication

EP 0022156 A2 19810114 (DE)

Application

EP 80102676 A 19800514

Priority

DE 2927198 A 19790705

Abstract (en)

[origin: US4351386A] To provide for axial guidance of cooling fluid, typically water, through a double-jacketed cooling roller which has an outer jacket (5) rotatably positioned over an inner stationary displacement body (6), in which the inner displacement body is smaller than the inner surface of the outer jacket to define a space (19) for flow of cooling fluid therethrough, the inner surface of the outer rotating jacket (5) is formed with spirally extending surface deformations (16), such as grooves or ridges or ribs or vanes, to transport water being centrifugally pressed against the inner walls of the rotating jacket (5) in axial direction. The axial end of the chamber (19) preferably is formed by an enlarged radially extending chamber (21) in which guide vanes (22) are located to return water flow to a hollow central shaft (9) for removal of cooling fluid axially therethrough. The hollow shaft (9) preferably acts as a central stationary shaft about which the outer jacket (5) rotates, so that rotary seals for water supply and removal can be eliminated.

Abstract (de)

Kühlwalze mit einem äusseren Walzenmantel und einem konzentrisch in diesem gelagerten zylindrischen Innenkörper zur Bildung eines Strömungszwischenraumes für ein durch die Hohlachse eines Innenkörpers zugeleitetes Kühlmittel, dadurch gekennzeichnet, daß der Innenkörper ein ortsfester Kühlmittelverdrängungskörper (6) ist und daß die Innenseite (16) des äusseren in Seitenwänden (1, 2) drehbar gelagerten Walzenmantels (5) eine Kühlmittelförderspirale aufweist, wodurch das an einer Seite über die Hohlachse (9) radial dem Kühlmittelströmungszwischenraum (19) zugeführte Kühlmittel in Achsrichtung der Kühlwalze gefördert wird.

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F28D 11/02

IPC 8 full level

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CPC (source: EP US)

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Cited by

FR2628830A1; US4582128A; CN113002158A; DE3536236A1; GB2181816A; GB2181816B; WO8402573A1

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EP 0022156 A2 19810114; **EP 0022156 A3 19810408**; **EP 0022156 B1 19830921**; DD 151717 A1 19811104; DE 2927198 A1 19810115; DE 3064895 D1 19831027; JP H01136279 U 19890919; JP H0435728 Y2 19920824; JP S5620994 A 19810227; US 4351386 A 19820928

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